

THIS PAGE IS INSERTED BY OIPE SCANNING

IMAGES WITHIN THIS DOCUMENT ARE BEST AVAILABLE COPY AND CONTAIN DEFECTIVE IMAGES SCANNED FROM ORIGINALS SUBMITTED BY THE APPLICANT.

DEFECTIVE IMAGES COULD INCLUDE BUT ARE NOT LIMITED TO:

BLACK BORDERS

TEXT CUT OFF AT TOP, BOTTOM OR SIDES

FADED TEXT

ILLEGIBLE TEXT

SKEWED/SLANTED IMAGES

COLORED PHOTOS

BLACK OR VERY BLACK AND WHITE DARK PHOTOS

GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.
RESCANNING DOCUMENTS *WILL NOT*
CORRECT IMAGES.**

INVENTION SUBMISSION CORPORATION

GENERAL CONSIDERATIONS

Introduction: Disclosure to ISC

This Information Summary relates to a product concept called "PORTABLE TRAFFIC LIGHT" which has been disclosed to ISC by Mr. Milton Johnson of Decatur, Georgia. This Information Summary is based upon information and disclosure forms submitted to ISC by the originator along with notes from conversations with our ISC sales representative. We have also supplied general marketing information tailored to "PORTABLE TRAFFIC LIGHT" and have made suggestions when appropriate. The result is a reference tool which can be used to submit "PORTABLE TRAFFIC LIGHT" to industry in a logical format which stresses its positive and most appealing features.

In preparing the Basic Information Package, we utilize standard statistical data with a heavy orientation on material prepared by the U.S. Department of Commerce and the Bureau of the Census. We attempt to supplement this data with more specialized information available from other basic marketing reference works, trade associations, trade publications, libraries, and other sources. The statistics provided in this report should not be interpreted as projections. Statistics generally lag two or more years behind the current year because of the time required by the various sources to compile and summarize the figures.

INVENTION SUBMISSION CORPORATION

The completion of the Disclosure to ISC and Record of Invention form documents the confidential disclosure of "PORTABLE TRAFFIC LIGHT" to ISC on a given date and may help establish a record of origin and disclosure to others.

Description: Product Concept Review

In this Information Summary, we will review the distinctive features of the product concept and the needs it may fulfill. The concept of "PORTABLE TRAFFIC LIGHT", as Mr. Johnson submitted it to ISC, is a battery-powered traffic signal for intersections that can be used during power outages. This product would help restore order to busy intersections and eliminate the need for a policeman directing traffic. It would simulate a standard traffic control light at an intersection so confusion and accidents can be avoided.

The rectangular device would measure approximately 18 to 24 inches tall, 6 to 8 inches long, and 6 to 8 inches wide. Each operating face of the product would contain the standard traffic light signals for display to motorists. This would consist of round red, yellow, and green lights in a vertical row (from top to bottom).

The "PORTABLE TRAFFIC LIGHT" could be stored in existing traffic control boxes at intersections so they are always readily available to emergency

INVENTION SUBMISSION CORPORATION

personnel when needed. A hook on top would enable the lightweight product to be easily suspended from the existing traffic signal harness at an intersection.

The "PORTABLE TRAFFIC LIGHT" would incorporate a built-in battery and/or solar cell for power. It would include an on/off switch for easy operation and conservation of battery charge. The device would also contain computer electronics used to determine how much time to give to priority traffic. Sensors or timers would be built into the system to help control traffic flow at intersections. For example, it could sense the traffic passing by, or alternatively, simply change the light signals in timed intervals.

In the event of a power outage, police or emergency personnel could drive to an intersection and retrieve the "PORTABLE TRAFFIC LIGHT" from a storage box. The battery-powered product would be turned on and suspended from the traffic control harness so it can be viewed by each direction of approaching traffic. Motorists could easily interpret the traffic signals and drive accordingly for safe and controlled passage through the intersection.

Once the electrical problem is corrected and the standard overhead traffic signals are operational, the battery-powered signal unit could be retrieved and stored until needed again. The product may also be used in special circumstances such as



INVENTION SUBMISSION CORPORATION

construction areas, bad accident scenes, fires, floods, and other situations where traffic needs informed and directed.

Function and Appealing Features

"PORTABLE TRAFFIC LIGHT" is being suggested by Mr. Johnson because he believes it would fulfill the need for traffic control at intersections during power outages.

The appealing features of "PORTABLE TRAFFIC LIGHT" would be its convenience, safety, organization, and the traffic jams avoided. Instead of mass confusion at intersections during power outages, the emergency situation could be handled with battery-powered traffic signals. The signals would give each direction of traffic a fair amount of time to travel through the intersection or make turns. The signaling system would be highly visible and easily interpreted, helping to prevent accidents and keep traffic moving in an orderly manner. The device would also be portable, dependable, adjustable in time settings, and adaptable to different emergency situations.

Historical Development

Mr. Johnson drives a city bus and has personally witnessed the problems and danger created at intersections when a power outage occurs. He conceived the "PORTABLE TRAFFIC LIGHT" as a direct response to this problem.

KEV-227



INVENTION SUBMISSION CORPORATION

Subsequently, Mr. Johnson submitted sketches and a written description of his invention for review by ISC. No attempts have been made to market or manufacture the "PORTABLE TRAFFIC LIGHT".

INVENTION SUBMISSION CORPORATION

PRODUCTION CONSIDERATIONS

ISC's work is based on the premise that the originator has predetermined that "PORTABLE TRAFFIC LIGHT" will work, function as designed, serve the intended purpose, and accomplish those objectives desired. We do not express an opinion regarding feasibility nor do we make projections regarding the success of an idea or concept as the elements involved in marketing are many and complex.

Design and Development

Some additional research and development activities may be required to further develop this idea. Additional research and development would likely relate to determining the most appropriate size of battery used and the length of time it would provide efficient operation. Also of concern would be the size and placement of the solar cell used in powering or charging the equipment (if equipped).

Additional research and development activities could ideally be conducted by a manufacturer who might become interested in producing and marketing "PORTABLE TRAFFIC LIGHT". Major manufacturers are well equipped to conduct a variety of in-depth research and development activities in their areas of interest. They have readily available the manpower, facilities, and capital that would be required.



Variations

The potential exists for varying the production of "PORTABLE TRAFFIC LIGHT" in ways which could make it more appealing to a wider range of end users. This could include producing the traffic control signal in different styles to accommodate specific types of intersections. This could include models for three- and four-way intersections.

Mr. Johnson indicates the product could also be designed as a portable stop sign for the same functions of traffic control. This could be used while intersections are being repaired and power interruptions exist due to accidents or natural disasters. The sign could have a retractable arm with a folding base for easy storage.

Producibility

While "PORTABLE TRAFFIC LIGHT" remains in a conceptual state of development, it appears that manufacture would encompass existing technology and make use of relatively standard materials and manufacturing processes. The ultimate design developed may require some variations in current production procedures but would likely not require any new technology.

The traffic signal frame could be produced of a strong plastic such as injection-molded polypropylene or high-density polyethylene (HDPE). Another alternative would be a lightweight frame fabricated from stamped aluminum

INVENTION SUBMISSION CORPORATION

components that are painted. Tough, non-glare polycarbonate lenses colored yellow, green, and red could be used to cover the lights that serve as the signals. Some of the other components comprising the "PORTABLE TRAFFIC LIGHT", such as the light bulbs, control switch, battery, and wiring, would likely be available from other manufacturers for final assembly.

Packaging

In the event that "PORTABLE TRAFFIC LIGHT" is manufactured, it will require a package. Developing a package for a new product involves numerous considerations. Requirements for packaging can be highly variable. Some items, such as automobiles and heavy machinery, are not usually packaged. Other items, notably consumer goods, require elaborate packaging designs.

Industrial packaging is primarily concerned with identifying and protecting the product during shipment and storage. While some industrial products can be shipped as single units, others must be shipped as sub-assemblies and used in the production process or installed by millwrights or technicians at plant facilities.

"PORTABLE TRAFFIC LIGHT" could be packaged in a corrugated cardboard, self-shipping box. The package could have a label printed in one or more colors (including four-color process) on a pressure-sensitive paper stock. Ideally, the

INVENTION SUBMISSION CORPORATION

label would not only identify the product but also show it in use. Cardboard inserts could be inserted into the package to protect the product.

Cost Estimates

A wide range of factors influence the selling price, distribution channel markups, and unit cost of a product. The large number of variables and their fluctuations make it exceedingly difficult (if not impossible) to accurately estimate price, markups, and cost factors short of actual manufacture and distribution.

One common approach towards the selection of a possible selling price considers "positioning" of the proposed product relative to other existing products with similar attributes. Price positioning therefore is part of the overall market position and reflects a price which could be in line with the potential perceived value for the proposed product.

Once "price" or "perceived value" is estimated, consideration can then be given to what type of markup structure could reasonably be used to arrive at such a final selling price, given known or estimated markup correlations between retailers, wholesalers or distributors, and manufacturers. We use a retrospective approach and work with an estimated selling price to approximate wholesaler markups and manufacturing costs.

INVENTION SUBMISSION CORPORATION

Manufacturers, in determining their prices, also consider such factors as fixed costs associated with plant, equipment, and tooling; factors such as the costs of raw materials, labor (affected by automation), assembly techniques, packaging, and overhead; and marketing variables such as the costs of shipping and handling, sales expenses, warranty and return factors, factors of loss, overhead, competitive pricing, geographic and demographic location, etc.

Within the scope of this Basic Information Package report, even the best efforts can result in deriving only rough approximations for the positioning of selling price, corresponding distributor channel markups, and potential manufacturing costs. For working purposes in preparing this Information Summary, however, we project an estimated pricing structure as follows:

- Manufacturing Cost: \$ 50.00 to \$ 75.00 per unit
- Wholesale Price: \$100.00 to \$150.00 per unit
- Sales Price: \$200.00 to \$300.00 per unit

Of course, production in various sizes and the use of varied materials and processes would suggest corresponding variations in this estimated pricing structure.

Industrial Classification

One of the primary roles of ISC is to submit new product ideas to industry in the hope of obtaining a good faith review. ISC attempts to submit inventions to those

INVENTION SUBMISSION CORPORATION

companies who may be interested in further developing, manufacturing, or marketing new products originating from individuals. Such companies may seek additional items to broaden their product lines or to absorb excess production capacity and may become interested in inventions for diversification and growth purposes.

There are firms that are capable of manufacturing "PORTABLE TRAFFIC LIGHT", and their capabilities are classified according to the Standard Industrial Classification (SIC) system developed by the U.S. Department of Commerce. Under the SIC system, each manufacturing category is assigned a numerical classification code. In preparing this Basic Information Package report, we designate manufacturers in a general category using a four-digit SIC code. The following represents the number of manufacturers classified in the broad category corresponding to "PORTABLE TRAFFIC LIGHT":

- 1,492 Manufacturers of Communications Equipment,
n.e.c. (SIC 3669) (includes manufacturers of traffic signals)

Only a small percentage of these manufacturers may be appropriate candidates for the submission of "PORTABLE TRAFFIC LIGHT". When submitting "PORTABLE TRAFFIC LIGHT" to industry, a more defined SIC number will be designated. This SIC number can then be used to retrieve the names

INVENTION SUBMISSION CORPORATION

of potential manufacturers from general directories or from firms that are registered in our Data Bank.

Introducing NAICS

The U.S. Department of Commerce recently implemented a new classification system, the North American Industrial Classification System (NAICS), to replace its Standard Industrial Classification (SIC) system. The SIC system was first instituted more than 60 years ago and was most recently revised in 1987. NAICS (pronounced "nakes") is similar to the SIC system but features many important additions and revisions that reflect new technology enterprises and services important to our present economy.

NAICS was developed in conjunction with Canada and Mexico to more easily interpret and compare economic data among these allied trading partners and to more realistically describe and measure the present U.S. economy. Indeed, NAICS provides 1,170 detailed industry classifications, 15 percent more than were available using the 1987 SIC system. NAICS includes 358 new industry codes and 390 revised industry codes.

The 1997 Economic Census data is the first to be reported using the NAICS system. (The Economic Census is conducted every five years.) Because this census data takes one to two years (or more) to be compiled and published, businesses that

INVENTION SUBMISSION CORPORATION

rely on industrial classifications and census information are expected to be in transition, using both SIC and NAICS while awaiting the release of reports in greater detail using the new system.

ISC will continue to use data compiled by four-digit SIC codes until comparable (new) statistics are released by the Commerce Department, which will then be used by ISC for inclusion in the Basic Information Package and for use in providing other services. (More information about NAICS as well as the release dates of census data can be found online at the Census Bureau web site: www.census.gov/.)

Beginning March 16, 1999, the Commerce Department released the first (preliminary) data from its 1997 Economic Census. It may be of interest to note the number of manufacturers (with payroll) specified by the new 6-digit NAICS category corresponding to "PORTABLE TRAFFIC LIGHT":

- 465 Manufacturers of Miscellaneous Communications Equipment
(NAICS 334290)

INVENTION SUBMISSION CORPORATION

MARKET CONSIDERATIONS

Competitive Environment

When considering the introduction of a new product to the marketplace, one of the factors that should be considered is the competitive environment. Efforts should be made to learn what existing competitors are offering to their customers and the customers' wants and needs. A new product introduction can be an improved or modified version of an existing product or it can be a totally new product innovation. In either case, the competitive environment should be studied to determine the existence of similar or identical products.

The inventor has disclosed a belief that this product concept is original; we have relied on this information when preparing this report. We conduct a necessarily limited check of the marketplace for competitive products. An in-depth investigation is not possible as there is no definite way to assure that an idea or product has not been tried or thought of in the past or is not now in use somewhere in our country or elsewhere. In addition, the competitive environment changes daily. Old products disappear; new ones appear. Seasonal trends also influence the availability of products. While a check of the marketplace may turn up nothing today, a similar product may already be produced and on its way to a distributor. A new product may even be on the drawing board in preparation of actual manufacture, and of



INVENTION SUBMISSION CORPORATION

course there would be no way for us to know of its existence. A competitive product may also be available within a specific geographical market area or available only on a limited basis as part of a test marketing program, so it is possible that neither the inventor nor ISC would be able to locate competitive products:

In preparing our Basic Information Package reports, we generally review catalogs for the existence of similar products. In conducting such a spot-check for "PORTABLE TRAFFIC LIGHT", we did not find an existing competitive product on the market.

Benefits, Appeals, and Trends

Many factors influence the acceptance of a product in the marketplace. Two of the major factors relate to the needs a product fulfills (the benefits) and a desire to own that product (the appeal and/or a combination of these factors). Also important are the trends pertaining to the invention. Within this section of our Information Summary, we will consider the various benefits, appeals and trends which relate to "PORTABLE TRAFFIC LIGHT".

Any motorist who has ever approached an intersection where the traffic signals are inoperable knows the confusion and danger that may be experienced. Electrical power to the signals may have been disrupted due to a severe storm or a transformer knocked down in an accident.

INVENTION SUBMISSION CORPORATION

Regardless of the cause, motorists are often confused as to who has the right-of-way in these situations. There is often a greater risk of accidents occurring until the electricity can be restored. A daydreaming motorist approaching the intersection with the traffic signals out, for example, may pass directly into the path of another driver in cross traffic who already decided to enter the intersection. This can result in a serious broadside collision, involving extensive damage to both vehicles and possibly a loss of life.

While police officers are sometimes used at intersections to direct traffic in times of distress, the hand signals given can sometimes be confusing and misinterpreted. This makes power outages and emergency situations difficult to handle and may pose a safety threat to both travelers and officers standing in intersections.

In an effort to provide a safe and effective means of maintaining order in busy intersections when the electrical power fails, Mr. Johnson has conceived the "PORTABLE TRAFFIC LIGHT". This portable traffic light system could be suspended from the existing traffic signal harness at the intersection and turned on when a problem arises. The device would provide the standard green, yellow, and red lights in a timed sequence so motorists all have a fair chance to proceed. It could even be designed to detect traffic and operate the signals accordingly.

INVENTION SUBMISSION CORPORATION

One benefit of using the "PORTABLE TRAFFIC LIGHT" in an emergency would be the accidents avoided. Motorists would not fear being stuck broadside by other drivers who are not receiving signals from the traffic light. The portable device would clearly indicate which direction of traffic is permitted to proceed while others stop and wait their turn. The battery-powered signal would be elevated, easy to understand, and adaptable to a variety of emergency situations.

Motor vehicle accidents result in billions of dollars in damages every year. This does not include wages lost, medical expenses, insurance and administration costs, and property damage from moving motor vehicle accidents. Also not included are the cost of public agencies such as police and fire departments, employer costs as a result of indirect losses due to off-the-job accidents to employees, and the value of cargo losses in commercial vehicles. By using the "PORTABLE TRAFFIC LIGHT" at intersections during power outages, the occurrence and subsequent cost of serious accidents could be reduced.

Use of the "PORTABLE TRAFFIC LIGHT" would eliminate the need for a police officer at every intersection directing traffic. This would prevent spreading the police force thin when they could be used for other safety-related purposes. The "PORTABLE TRAFFIC LIGHT" would be easier to interpret



INVENTION SUBMISSION CORPORATION

than the hand signals of a police officer since the brightly-colored signals would be elevated and clearly duplicate the familiar red, yellow, and green traffic lights.

This portable lighting system could greatly improve traffic flow in power outages and other difficult situations. It could prevent vehicles from backing up for blocks in one direction due to the inability of drivers to enter heavy traffic. It would bring organization and control to an intersection that might otherwise be chaotic and confusing when electrical service is cut.

In regard to the "PORTABLE TRAFFIC LIGHT", it is interesting to note trends relating to motor vehicle travel and safety. Motor vehicle travel is the primary means of transportation in the United States, providing an unprecedented degree of mobility. Yet for all its advantages, deaths and injuries resulting from motor vehicle crashes are the leading cause of death for persons of every age from 5 to 29 years old.

Fortunately, much progress has been made in reducing the number of deaths and serious injuries on our nation's highways. In 1998, the fatality rate per 100 million vehicle miles of travel remained at its historic low of 1.6, the same as in 1997 and down from 1.7, the rate from 1992 to 1996. The 1988 rate was 2.3 per 100 million vehicle miles traveled.



INVENTION SUBMISSION CORPORATION

A 69 percent safety belt use rate nationwide and reduction in the rate of alcohol involvement in fatal crashes to 38 percent were significant contributions to maintaining this consistently low fatality rate. However, much remains to be done. The economic cost alone of motor vehicle crashes in 1994 was more than \$150.5 billion.

In 1998, 41,471 people were killed in the estimated 6,334,000 police-reported motor vehicle traffic crashes. This translates to an average of 114 people killed per day in motor vehicle crashes—one every 13 minutes. There were also 3,192,000 people injured in accidents, and 4,269,000 crashes that involved property damage only.

In 1998, the fatal crash involvement rate per 100,000 population was almost three times as high for male drivers as for females. However, the population-based rates do not account for the actual on-road exposure, which is greater for males, or the percentage of the population that has driver licenses, also greater for males.

When driver fatality rates are calculated on the basis of estimated annual travel, the highest rates are found among the youngest and oldest drivers. Compared with the fatality rate for drivers 25 through 69 years old, the rate for teenage drivers is almost four times as high, and the rate for drivers in the oldest group is nine times as high.

INVENTION SUBMISSION CORPORATION

Market Targets

One of the most important factors to consider in the new product development process is the size of the potential market. For purposes of this report, a "market" is defined as the "set of potential purchasers" of a new product. While few products have universal appeal, it is possible to generally define a broad market to give an indication of its size. Since most products are targeted to specific groups of consumers with specialized interests, it is often possible to segment the market into submarkets. Each submarket differs in its requirements, buying habits, or other critical characteristics.

It is not our intention in this section to imply that all or even any of the markets identified would represent actual purchasers of "PORTABLE TRAFFIC LIGHT". Our purpose is simply to identify those groups which we view as being appropriate potential market targets for the invention in the event that it is manufactured and marketed.

The Primary Market would consist of government agencies and related public works departments. The product may be used by highway/road departments of the 3,043 county governments, 19,279 municipalities, 50 states, and 16,656 townships in America.

INVENTION SUBMISSION CORPORATION

The Secondary Market would consist of various contractors who perform work on or near highways. This could include some of the estimated 4,371 highway and street contractors and 14,398 paving contractors in America.

There are 3.9 million miles of highway in the U.S., of which 3.1 million miles are rural, and 819,700 miles are urban. Local roads account for 2.7 million miles of this total; interstate highways account for 54,700 miles; and collector roads and other arterial highways account for almost 1.2 million miles.

The "PORTABLE TRAFFIC LIGHT" could be heeded by operators of some of the estimated 129,748,704 passenger cars, 9,837,900 minivans, 36,191,800 pickup trucks, 13,762,500 sport-utility vehicles, 5,572,700 vans or panel trucks, 1,770,700 station wagons, 685,504 buses, and 1,335,465 semi-trucks registered in this country.

The Tertiary Market would consist of utility companies that sometimes need to slow and/or direct traffic. This could include the estimated 7,073 cable television companies, 5,402 electric companies, and 5,362 gas companies.

The Quartern Market would consist of the international market.

Many products today enjoy worldwide distribution. The interdependence of nations, growing import and export trade, and expanding common markets have all tended to draw our world closer together in both buying habits and product



INVENTION SUBMISSION CORPORATION

utilizations. With more liberal trade policies and increased freedom of travel, the interest in foreign markets is bound to increase.

In 1997, the value of U.S. exported goods totaled \$689.18 billion, of which \$592.5 billion, or 86 percent, was manufactured goods. Canada is by far America's

highest volume trading partner, accounting for \$151.77 billion of U.S. exports.

Mexico imported \$71.39 billion in U.S.

goods; Japan, \$65.55 billion; the United

Kingdom, \$36.43 billion; South Korea,

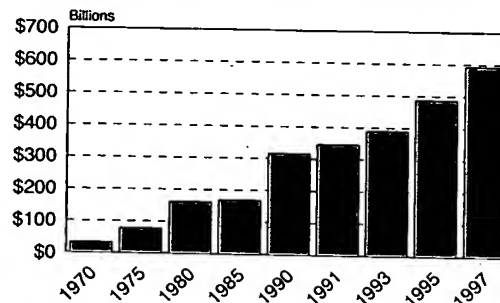
\$25.05 billion; and Germany, \$24.46 billion. Nine additional countries each

imported more than \$10 billion in American goods: Taiwan, Netherlands,

Singapore, France, Hong Kong, Belgium, China, Brazil, Australia, and Malaysia.

The value of exports to these nations totaled \$140.59 billion.

U. S. Exports of Manufactured Goods



Source: Statistical Abstract of the United States 1998.

Distribution Channels

Once the potential market targets for a new product have been identified, consideration should be given to identifying the types of outlets where the product could potentially be distributed to those market targets. In this section, we will identify potential channels of distribution for "PORTABLE TRAFFIC LIGHT". However, there is absolutely no way that anyone can project with any



INVENTION SUBMISSION CORPORATION

accuracy the number of distribution outlets which might actually handle any given product.

In obtaining the number of outlets for a particular distribution channel, we utilize information provided in the Census of Retail Trade, the Census of Wholesale Trade, and the Census of Service Industries. When suitable statistics are not available from the U.S. Department of Commerce, we rely upon business lists such as those maintained by Dun & Bradstreet.

The following channels represent potential outlets where "PORTABLE TRAFFIC LIGHT" could be distributed:

- Wholesalers of Safety Products & Supplies:	2,132
- Wholesale Distributors of Contractors' Equipment & Supplies (includes manufacturers):	11,111
- Merchant Wholesalers of Miscellaneous Commercial Equipment:	4,360
- Agents, Brokers, and Commission Merchants of Miscellaneous Commercial Equipment:	488

Distribution to the international market would involve selected exporters as indicated below:

- Wholesale Merchant Exporters of Miscellaneous Commercial Equipment:	56
- Wholesale Merchant Exporters of Transportation Equipment & Supplies:	414

INVENTION SUBMISSION CORPORATION

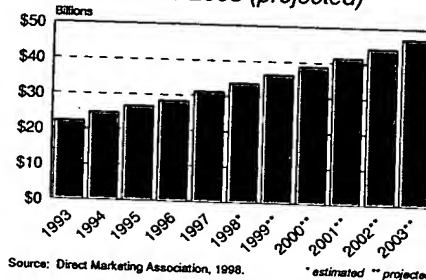
Direct Marketing to Businesses

In addition to mainstream wholesale outlets, "PORTABLE TRAFFIC LIGHT" could also be distributed by mail order catalog, Internet commerce, and/or other direct marketing initiatives to businesses.

Direct marketing to businesses resulted in an estimated \$612.2 billion in sales in 1998, and represented 45 percent of total sales generated by direct marketing initiatives that year.

The Direct Marketing Association (DMA) reports that U.S. businesses spent \$82.6 billion marketing directly to other businesses in 1998, resulting in \$174.7 billion in sales from direct orders, \$393.1 billion in sales from generated leads, and \$44.4 billion in sales from generated in-store traffic. As a

U.S. Catalog Sales to Business
1993 to 2003 (projected)

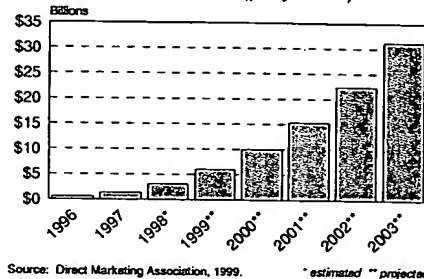


whole, American firms spent the most for telephone marketing in their business-to-business direct market expenditures, a labor-intensive medium that accounted for \$39.2 billion, or 47 percent, of total spending. Direct mail accounted for \$15.0 billion, or 18 percent, of direct marketing expenditures in 1998. This included \$3.79 billion spent for catalog initiatives, a category that generated \$33.7 billion in sales.

INVENTION SUBMISSION CORPORATION

Business-to-business sales are outpacing consumer sales in the newest channel of direct marketing, Internet marketing. The DMA reports estimated sales to businesses totaled \$3.07 billion in 1998, representing 65 percent of Internet commerce generated from direct marketing that year. U.S. firms spent \$379.7 million for marketing initiatives in this leading edge, interactive medium.

U.S. B-to-B Internet Sales
1996 to 2003 (projected)



The DMA projects that total expenditures for business-to-business direct marketing initiatives will grow an average of 7.4 percent annually during the next few years, reaching \$118.3 billion in 2003. Spending for business-to-business Internet marketing is projected to reach \$3.24 billion by 2003, while spending for catalog marketing to businesses is projected to reach \$4.86 billion. The DMA expects sales resulting from these two direct marketing segments to reach \$31.17 billion and \$47.13 billion, respectively, as total sales from business-to-business initiatives reach \$974.9 billion in 2003.

INVENTION SUBMISSION CORPORATION

BIBLIOGRAPHY

Dun & Bradstreet Business Prospectors' Catalog, Dun & Bradstreet, Inc., Wayne, Pennsylvania, 1997.

1997 Economic Census: Manufacturing, Geographic Area Series, United States. U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau, January 2000. www.census.gov/ January 2000.

Statistical Abstract of the United States: 1997 (117th Edition). Bureau of the Census, Department of Commerce, Washington, D.C., October 1997.

Statistical Abstract of the United States: 1998 (118th Edition). Bureau of the Census, Department of Commerce, Washington, D.C., October 1998.

Ward's Motor Vehicle Facts & Figures 1999, Ward's Communications, Southfield, Michigan, 1999.

1997 Economic Census, Vehicle Inventory and Use Survey, United States, U.S. Census Bureau, U.S. Department of Commerce, October 1999.

"Sales Leads and Mailing Lists," American Business Information, August 1999.

1998 Economic Impact: U.S. Direct Marketing Today (Executive Summary). Direct Marketing Association, New York, New York, 1999. www.the-dma.org, May 1999.

DESIGN ADVANTAGES:

- ◆ Eliminates instances of mass confusion at street intersections due to a power outage
- ◆ Portable unit provides each direction of traffic with a fair amount of time to travel through the intersection or make a turn
- ◆ Ends needs for police officer to risk injury and stand at intersection
- ◆ Highly visible and easily interpreted design helps to prevent accidents and keep traffic moving in an orderly manner
- ◆ Unit is adjustable and adaptable to different emergencies.

DESIGN FEATURES:

- ◆ Rectangular device measures approximately 18 to 24 inches tall, 6 to 8 inches long and 6 to 8 inches wide
- ◆ Each operating face of the unit features the standard red, yellow and green traffic light signals for display to motorists
- ◆ Incorporates a built-in battery and/or solar cell for power
- ◆ Also includes an on/off switch for easy operation and conservation of battery charge
- ◆ Internal electronics determine how much time to give priority traffic
- ◆ Sensors or timers are built into the system to help control traffic flow at intersections; signal could sense traffic passing by or simply change light signals in timed intervals.
- ◆ In the event of a power outage, police or emergency personnel can drive to an intersection and retrieve the unit from its storage box
- ◆ Unit is turned on and suspended from the traffic control harness so that it can be viewed by each direction of opposing traffic

- ◆ Once the electrical problem is corrected and the standard overhead traffic signals are operational, this signal can be stored and retrieved until needed again
- ◆ Invention might also be stored in existing traffic control boxes at intersections so that they are readily available in an emergency
- ◆ Device can also be used in special circumstances such as in construction areas, or at bad accident scenes, fires, floods, etc.

TARGET MARKETS:

- ◆ Government agencies and public works departments
- ◆ Various contractors who perform work on or near highways
- ◆ Utility companies that may need to slow or redirect traffic

MARKETING OUTLETS:

- ◆ Wholesaler distributors of contractors' equipment and supplies (includes manufacturers)
- ◆ Merchant wholesalers of miscellaneous commercial equipment
- ◆ Wholesalers of safety products and supplies
- ◆ Agents, brokers and commission merchants of miscellaneous commercial equipment

SIC CODES:

- ◆ 3669

00-KEV-227

For immediate information please call Intromark at 1-800-851-6030

